JUL 6 1927

The
Public Health Journal

OFFICIAL ORGAN
Canadian Public Health Association

Vol. XVIII TORONTO, JUNE, 1927 No. 6

SPECIAL ARTICLES

THE PROGRESS OF MATERNAL WELFARE IN THE UNITED STATES AND CANADA
Dr. W. W. Lailey

HOW TO SAFEGUARD THE MILK WE USE
John W. S. McCullough, M.D., D.P.H.

THE LOW BIRTH-RATE OF BRITISH COLUMBIA—CAUSES AND A REMEDY
Herbert B. French, M.A.

RADIO TALK

RED CROSS OUTPOST HOSPITALS
Dr. F. W. Routley

$2.00 per annum 40 ELM STREET, TORONTO 2 20 cents per copy

Insulin-Toronto

For the treatment of Diabetes Mellitus

Insulin-Toronto is a concentrated aqueous solution of the internal secretion of the pancreas. It is made in large lots to ensure a uniform product, under expert scientific supervision, and is carefully tested for potency and stability before distribution.

This product is distributed in 10 c.c. vials and in three strengths:

10 units per c.c. — 100 units per vial
20 units per c.c. — 200 units per vial
40 units per c.c. — 400 units per vial

Diphtheria Toxoid
(Anatoxine Ramon)

Diphtheria Antitoxin — Tetanus Antitoxin

Diphtheria Toxin for Schick Test

Scarlet Fever Antitoxin — Scarlet Fever Toxin

Scarlet Fever Toxin for Dick Test

Anti-Meningitis Serum — Anti-Anthrax Serum

Normal Horse Serum

Anti-Pneumococcic Serum
(Type I)

Typhoid Vaccine — Rabies Vaccine

Typhoid-Paratyphoid Vaccine

Pertussis Vaccine

Price List Upon Request

CONNAUGHT LABORATORIES

University of Toronto

TORONTO 5 CANADA

The Public Health Journal

Vol. XVIII. TORONTO, JUNE, 1927 No. 6

The Progress of Maternal Welfare in the United States and Canada

W. W. Lailey, B.A., M.B.

THE advantage of preventive medicine as applied to obstetrics has been preached to practising physicians for the last quarter of a century, but like the peoples of old mentioned in Holy Writ, it has seemed sometimes to have had only the effect of hardening the heart against it.

In the United States the publishing of the frightful maternal and infant mortality figures by the Census Bureau in 1906 awoke the leaders of the medical profession to the need of action to devise ways and means to prevent the largely preventable loss of life.

Paralleling this movement, in New York City and others was begun a study of the causes of infant mortality. This latter movement, unlike the former, progressed rapidly and with truly remarkable practical results. A few years later it was clearly perceived that many of the infant deaths took place in the neonatal period, and that about half of these were due to obstetrical causes. Thus infant welfare work became closely associated with maternal welfare interests, and municipal and state organizations made maternal welfare a branch of their Infant Welfare Department. It was in 1912 that the Federal Government of the United States established in its Department of Labour a Children's Bureau which devoted itself to maternal and infant welfare. Since this time every American city has recognized the importance of ante natal care, both by the municipal agencies and medical organizations.

In the American Republic there have been many difficulties in the way to the gaining of widespread adoption of methods which have proven to be of great advantage in eliminating risk in maternity. Canada has an advantage in having no negro or midwife problem, but otherwise conditions are similar in the two countries. Therefore a brief outline

Read before the Combined Meeting of the Section of Obstetrics & Gynaecology with Section of Prev. Med. & Hygiene, Mar. 3/27. Academy of Medicine.

of the successful methods used in behalf of better obstetrics in the United States should be of value in deciding upon the best course to pursue in Canada.

The progress that has been made from the condition existing 20 years ago has not been due to any single agency, but to a combination of forces; and the direction of these forces has rested in the medical profession itself. The Federal Government, State Governments, Municipal Authorities and Lay Organizations have all given valuable support to medical leadership. The Federal Government through the Shepard-Towner Act gives to those States who request it considerable financial aid upon certain conditions of supervision of maternity care in that State. The individual States have in many instances also provided further financial support, through their organizations. New York State has organized mothers' Health Clubs—Maternal and Infant Exhibits at Country Fairs—Surveys in districts which have shown a particularly high mortality rate—Puerperal death questionnaire—and the providing of a sterile obstetrical package for use in labours to help in the prevention of puerperal sepsis—also the furnishing of record forms—films, slides, lecturers and lectures and literature to all types of organizations requesting them.

The large municipalities have accepted their share of the responsibility, and performed some efficient maternal and infant welfare work. Detroit, for instance, in 1920 had 50.3 stillbirths per 1,000 living births, and 43 infants, out of 1,000 born alive, died the first month of their lives. The maternal death-rate from child bearing in Detroit has averaged 6.75 per thousand deliveries for a number of years. This startling death-rate, which is not higher than most other large American cities, is sufficient to demonstrate that child bearing is a public health question. Detroit has established seven prenatal clinics with this, among other remarkable results, that the maternal mortality rate was reduced from 6.75 per 1,000 deliveries to 3.5 per 1,000, a reduction of about 50 per cent.

Lay Organizations have undoubtedly helped considerably in supplying a great volume of dynamic energy for the advancement of public health where the rank and file of the medical profession have been slow to move. The Maternity Centre Association of Manhattan, New York, is a notable example of one of these Lay Organizations, and, as Lobensteine states, such have been without question primarily responsible for awakening the public in general to the need of providing better supervision for the expectant mother.

Hospital Ante Natal Clinics are another great factor in demonstrating how eclampsia can practically be eliminated, and other causes of maternal death be largely avoided. In teaching centres they also provide a practical

demonstration to nurses, and medical students, of the routine of antenatal care.

Well equipped Maternity Hospitals have accomplished much in this branch of preventive medicine. Particular effort should be made to urge primiparous patients and abnormal ones to arrange for their confinement at the hospital. Primiparous patients are known to have a four times greater risk in maternity than multipara. As yet hospital accommodation for the pregnant and parturient woman is deplorably insufficient. Polak states that Brooklyn, with a population of 2,500,000, has only 300 available obstetric beds in the hospitals.

In Canada an attempt is being made to better the condition of the expectant mother, but there remains much to be accomplished. Up to the present Canada has through its Division of Child Welfare published an excellent booklet—"The Canadian Mother's Book" by Dr. Helen MacMurchy. This is sent throughout the country on request by private individuals, or by the Local Health Boards. A puerperal death questionnaire has also been in operation for the past few years, so that it is hoped more accurate official figures may be obtained on maternal mortality.

The Provincial Board of Health, through the Maternal and Child Welfare Division, have inaugurated a system of health education through public health nurses. In 1922 there were 16 nurses located in various centres, where they remain for periods varying from 2 to 6 months. Particularly do they teach child welfare: emphasize the danger signals of pregnancy and urge women to report to their physicians during the early months of pregnancy.

The Canadian Red Cross Society, in the establishment of their Outpost Hospitals and publishing of the Red Cross Manual, which reaches many hundreds of women, and supplements the work of the Provincial Government, deserves honorable mention in this list.

Canadian Hospital Clinics in the large centres have for many years been able to demonstrate a great reduction in infant and maternal mortality and morbidity. One of these, the Toronto General Hospital Clinic, gives the following figures: For the year 1925 there was 1 maternal death out of 521 clinic patients delivered (this was due to a heart condition); in 1926 out of 505 clinic patients delivered there were no deaths; 1924–1926 there was 1 clinic patient developed eclampsia.

To the Toronto Board of Health, under Dr. C. Hastings, belongs the honour of starting the first city ante natal clinic in Canada. In the year 1925 there were 5 of these clinics situated in parts of the city not easily accessible to hospital clinics. During the year there were 69 of these clinic patients confined at their own homes and 91 confined in the

public wards of different city hospitals. The patients are referred to the clinics by the public health nurse and some by their physicians, where the patient cannot afford to pay for prenatal care. The patient takes with her a chart on which is the record of the examinations made at the clinic, and this is available for her private physician or the hospital. One of the chief values of these clinics is the time given by the public health nurses to these women and their cheerful willingness to discuss and endeavour to help them with all their problems.

The future advance in Maternal Welfare Work, and one that will have the greatest effect in reducing the mortality figures, will be that effort to give by every means possible obstetrics at its best to the mothers of the great middle class. This goal will be reached through education. Education of Governments to give adequate financial aid and organized ability: education of the people to realize the importance of medical advice and supervision from the first and throughout their pregnancy and parturition: education of medical students, and medical practitioners to look upon obstetrics as on an equality with medicine and surgery, so that an operation in obstetrics will be as carefully considered as any abdominal operation.

Holland says "ante natal methods are the strategy, and intra natal methods the tactics of obstetrics. Obstetrics," he states further, "is the Cinderella of medicine, and she is only beginning to ascend to a proper position amongst her sisters."

References

1—Kosmok, George W., New York State Journal of Medicine. Aug. 1923, p. 335.

2—McKay, Florence, American Journal Obstetrics and Gynecology. 1925, Vol. 9, p. 335.

3—Welz, Walter E., American Journal Obstetrics and Gynecology. 1926, Vol. 2, p. 671.

4—Lobensteine, Ralph W., American Journal Obstetrics and Gynecology. 1923, Vol. 4, p. 286.

5—Polak, New York State Journal of Medicine.

6—Annual Report, Provincial Board of Health, Aug. 1923, p. 340.

How to Safeguard the Milk We Use*

By JOHN W. S. MCCULLOUGH, M.D., D.P.H.

MILK is the *best*, the *cheapest* and one of the most universally-used foods entering our homes. It is a perfect food for the infant, and combined with cereals, bread or potatoes, constitutes a valuable diet for the adult.

Those people who have employed the leaf of the plant as their sole protective food are small in stature, have relatively short lives, a high infant mortality and show slow advancement. Milk-using people are of greater size, are longer-lived and are more successful in every way than non-users of milk. They are more aggressive and have achieved much greater advancement in literature, science and art. They have developed in a higher form educational and political systems and are among the nations whose careers are marked by the highest progress.

Milk is the only animal food used in the raw state. Meat of all kinds, game, fowl and fish are cooked before being eaten. Because milk is used raw it is responsible for more sickness than all other foods combined.

Some Milk-borne Epidemics in Canada

In recent years there have been notable outbreaks of sickness due to milk. In 1922 and in 1924 the City of Montreal had a considerable number of cases and deaths from typhoid fever, the cause of which was traced to milk, while in March, April, May and June, 1927, that city had the appalling disaster of upwards of 4,500 cases of typhoid fever and about 200 deaths due to an unprotected milk supply. Quebec City in 1924 had an outbreak of typhoid. Vineland, Ontario, in 1921 had 20 cases. Hanover, Ontario, in 1923 had 46 cases with 4 deaths, while Winnipeg had 92 cases and 7 deaths, all of which were traced to the milk supply. Winnipeg has had epidemics of milk-borne typhoid in 1916, 1919, 1922, and 1925, while in Regina College, Regina, Sask., in 1920 there were 83 cases with 9 deaths due to milk infected from the dairyman who furnished the college supply. Milk carries tuberculosis either in the bovine (cattle) form or in the human form from the handlers. Cases of hunchback, hip disease, bone disease, enlarged glands from tuberculosis, are in a large proportion of cases derived from the milk of tuberculous cows.

There have been numerous outbreaks of scarlet fever, diphtheria and

*A pamphlet prepared for the public and for municipal authorities.

septic sore throat traced to the milk supply, and raw milk is the greatest cause of the summer diarrhoea of children.

Someone says all cattle should be tuberculin-tested and those with tuberculosis destroyed. Such a procedure would cause a milk famine because from 35 to 50% of cattle have tuberculosis and besides the financial loss from the elimination of tuberculous cows makes this question impracticable even if the government were in a position to provide the personnel to make the tests. After all the tuberculin testing of cattle and the destruction of those having tuberculosis would account only for bovine tuberculosis. There would still be left the danger of infection of the milk by human tuberculosis and all the wide range of other infections for which milk is an avenue of transmission.

The Remedy

Certified milk, if universally used, would solve the difficulty if the public could afford the expense, but after 20 years' experience in New York City, certified milk constitutes but ¾ of 1% of the entire milk consumption, while in Toronto last year, after 17 years of provision of certified milk, the consumption of this article was but ½ of 1% of the total supply. Nor is certified milk completely safe for it is known to have been infected from carriers, moreover the cases of tuberculosis that develop in certified herds in the course of a year have been found to range from 5% to 25%. During 1914, in one of the most celebrated certified herds of the United States, it was found that 191 tuberculous cows were taken out of a herd of 632 animals.

In addition to rigid inspection of cows, dairies, the handlers of milk and attendants, the care of utensils, the bottling and transportation must be supplemented by what is the real safeguard, namely, pasteurization of the milk at a temperature of 140° F. to 145° F. with a holding at this temperature for 30 minutes and subsequent cooling to 40° F.

Efforts should be made to educate the producers by judicious inspection and supervision, and when the milk reaches the home it should be kept on ice until used. If these precautions were in universal use little further would be heard regarding the incidence of milk-borne disease.

Objections to Pasteurized Milk

(1) It has been claimed that pasteurization destroys the lactic acid bacilli in the milk and that such milk does not sour but rots. Pasteurized milk will keep longer than raw milk, but since the lactic acid bacilli are not destroyed by pasteurization the souring process when it does occur is the same as that of raw milk.

(2) It is claimed that vitamins in the milk are destroyed. If this is

a fact the use of pasteurized milk in children may be supplemented by the use of orange, tomato or other fruit juices which will remedy any deficiency of vitamins and which should always be included in the food of young children.

(3) Some will say that the use of pasteurization will have a tendency to influence people to relax the other safeguards to the procuring of clean milk. No community should neglect any of the safeguards. Milk before being accepted should be up to the standards required by the Milk Act, the presence of dirt determined by the dirt test and the bacterial count checked by the available Department of Health laboratories.

(4) It is asserted that the requirement of pasteurization will place the distribution of milk in the hands of a few persons or companies and tend to cause a monopoly with resulting higher prices. A better article should command a higher price, but if the municipality finds that excessive prices are charged, a threat to cancel the by-law prescribing pasteurization would readily change the attitude of distributors asking high prices.

(5) Occasionally complaints are made of the taste of pasteurized milk. The same objections are raised to certified milk. The taste is different; there is less cow manure in milk subject to rigid inspection and to the other safeguards, including pasteurization.

How to Secure Pasteurized Milk in a Municipality

Under the amended Milk Act of 1927 a Council may pass a by-law making pasteurization and all other safeguards a feature of the by-law. This done, the by-law should be submitted to the Minister of Agriculture for his approval when it becomes law. Reasonable time should, of course, be given to dealers to establish their plants and the Medical Officer of Health should exercise close supervision over producers, handlers and dealers to see that the terms of the by-law are carried out.

The Department of Health will be glad to afford any possible assistance to municipalities in the procuring of safe milk supplies. Our Laboratories all over Ontario are ready to examine specimens of milk free of charge.

The Canadian Red Cross Society

By The Honourable William Renwick Riddell, LL.D., D.C.L.,
President of the Canadian Social Hygiene Council,

I CONSIDER myself highly honoured in being asked to address a Red Cross Meeting—and yet there is a certain fitness in the courteous invitation given me to do so. By that remark, I do not mean to refer to my oft repeated and long-continued association with my very dear friend, the late Colonel Noel Marshall—but my reference is to the fact that I am, and from its beginning have been, President of the Canadian Social Hygiene Council, which is conducting a Holy War for the health, physical and moral, of our beloved country.

This Council is carrying on a work looking toward much the same end as the Red Cross; not, indeed, in precisely the same way—not quite in the same part of the field, but in neighboring parts of the same field.

The fact of my presence here shows that neither of these organizations wants to "hog the road": we in the Council acknowledge with grateful thanks the cordial assistance of the Red Cross, both financially and morally, to us in our work—and, on our part, we extend to the Red Cross all the assistance in our power. We were about to go to the people on our own account, but we have delayed our call so as not to interfere with the present campaign; and we offer to the Red Cross all the help we, individually or as an organization, can give in any and every way.

As our boys fought as one in France and Flanders to keep Canada politically and nationally free, so we fight as one to make and keep Canada free from disease and want and misery.

The Red Cross has a special field of effort in caring for the soldier who fought for us.

When the recent wicked World War was thrust on the Empire, Canada did not delay a minute—"the last man and the last dollar" was her prompt message to the troubled Mother across the sea.

> Hear, O Mother of Nations, in your battle of Right and Wrong
> The voice of your youngest Nation chanting her Battle Song—
> Blood of your best you gave us—gave us that we might live,
> Blood of our best we offer—the best of our youth we give.

And many of our best and noblest gave themselves freely and willingly in that great cause, and all too many gave their very lives in supreme sacrifice. For the glorious dead, we can do nothing but honour their memory. There are, however, many who can be assisted; and in this

An address given at the meeting of the Canadian Red Cross Society, King Edward Hotel, Toronto, June 2, 1927.

field, the Red Cross finds one call for its efforts—it has already spent $7,000,000 in this work, Summer Homes for soldier patients in which hundreds of veterans are taken care of, Workshops in which hundreds of veterans find gainful employment, groups of workers who keep in daily touch with the ex-soldier, providing comforts, relief, amusement—and there has been paid in cash three and a half millions of dollars in direct subvention of governmental allowances.

There is, too, another soldier of civilization—he who carries no rifle or bomb but the weapons of peace, the axe and the hoe—his steed not the prancing and gaily caparisoned charger of the dragoon, but the patient, slow-moving, but strong and enduring horse in the plough. Such soldiers go far from the busy haunts of men to settle a new district: theirs not the City Hospital with its doors ever open—they cannot obtain municipal assistance for they have no municipality or only a municipality in embryo—doctors are few and far between, and laboring mother and stricken sufferer are in evil case. To such soldiers, the Red Cross comes as a veritable Angel of Mercy—it has established nearly 40 Outpost Hospitals and Nursing Stations in the wilds, all being centres of relief and healing—more are being established as rapidly as available funds will allow. Experienced and thoroughly capable Red Cross nurses attend suffering women in their hour of travail—over seven hundred mothers had the assistance of these kindly and skilled sisters during the past year alone—and but He who knows all can know the good thereby done, the suffering assuaged, the deaths prevented.

And here let me stress one fact. In Canada some 15,000 infants die annually under the age of one year, and about three-fourths of that number before the child is one week old. Most of these deaths are due to ignorance and want of care. We spend millions of dollars every year for immigration by the Steamship—what are we doing for immigration by the cradle? What would be thought of an immigration policy which resulted in a large number of foreign immigrants dying within a week or a year of their arrival? And what should be thought of a policy which results in a large number of native, Canadian-born, immigrants dying within a week or a year of their arrival? The Red Cross is doing its part—and a splendid part—in saving these, the best of all newcomers.

Nor is infantile mortality the only or even the most formidable of enemies to be met. Disease of every kind is rampant, a large percentage of it the result of simple ignorance or neglect. Taking one set of diseases only, I have often said that we complain, and rightly complain, of the brutal ambition of the German leaders which slew sixty thousand of our bravest and best; but we should remember that were we faithfully and diligently to employ the discoveries of two Germans, the loss in life to

Canada would be made up in less than ten years. And I am prepared to prove that if that set of diseases with their results were got rid of, more than 70 per cent. of the money spent in this Province in Hospitals, Asylums, etc., would be saved.

Take another disease, Diphtheria—we know the cause, the means of detection, the means of prevention; and there is no more need for diphtheria occurring than there is of leprosy; and it should be as rare: but it costs three million dollars and slays 1,200 Canadians every year.

Typhoid fever, almost unknown here, has killed some 300 in Montreal during the recent troubled times in that City, and it has an alarming annual toll elsewhere. It has been said—and I am inclined to agree—that for every one who dies of typhoid, some one should be hanged—neglect or ignorance is the cause. Cancer, as it has been calculated, kills one out of every thirteen men, one out of every eight women—at least, in what we call civilized countries. Cancer is curable as a rule in its earlier stages—while there are remedies which seem to be promising, so far the consensus of medical opinion seems to be that it is not curable in later development. Much the same thing is to be said of that other scourge, Tuberculosis, or "Consumption," which kills every year 5,000 Canadians, most of them in the prime of life, and costs us $40,000,000. Even Diabetes, which we thought conquered by our Toronto scientists, claims over 700 victims per annum. Moreover, even where death does not ensue, the extent of disability by sickness is alarming. It is certain that over a quarter of a billion dollars are lost every year in Canada by illness alone—about 75% of the total expenditure of the Dominion Government: one million dollars every working day. Of this at least one half is preventable—again due to ignorance and neglect.

If every one who has a "cold" would lie in bed, isolated from his fellows, and would not go out and mix with people on street cars, in meetings, at Church or Lodge, in store or workshop, Canada would save hundreds of thousands of dollars every year—and I think that the Apostolic prohibition against "'forsaking the assembly of ourselves together" would not apply to such a case. Every hour of sickness of a workman by so much enhances the price but not the intrinsic value of his product, and the country is so much the poorer; we all are sufferers along with the patient himself.

The money loss by preventable death and sickness is appalling—but what are we to say of the pain and anguish, the sorrow, the broken home, the widow and orphan left to the world's cold mercy? In our Domestic Relations Courts, it has been found that no small part of the juvenile delinquency is due to the broken home.

The Red Cross is an educative as well as a relieving agency—it is

instant in season and out of season, if that be possible, in not only offering, but even pressing upon the people at large, information and in stimulating interest in individual and public health—proper food, proper clothing, proper ventilation, proper habits of life, sleep, exercise, sunshine, avoidance of infection—in a word, everything that tends to keep a people whole.

These activities of the Red Cross are not well known; and therefore I have dwelt on them at some length. But everyone knows and everyone admires its magnificent work in relief.

Let there be a great calamity, a fire, a flood; and the Red Cross is on the spot. The splendid work of the sister organization in the United States in the terrible Mississippi inundation we all admire—but that is just what our own Red Cross is doing almost constantly—on a smaller scale indeed, for, thank God, its aid is not needed on so large a scale. It has had to deal with conflagrations, serious and widespread, with heart-rending epidemics, with disastrous and destructive cyclone—food, clothing, shelter, medicine, medical attendance, nursing, all the necessaries of life, of civilized and advanced life, have been provided—and that at once and without so much as solicitation.

The old Latin proverb still stands good: *Bis dat qui cito dat*—he gives twice who gives quickly—and the service of the Red Cross has been doubled in value by the speed with which it has been rendered. It is the Red Cross to which an afflicted Community at once turns for aid; and no reasonable expectation of help has ever been disappointed.

It is almost the first recorded saying: "'It is not good for man to be alone", and, however theologians may dispute concerning other recorded sayings, there is no dispute over the accuracy of this one. It is as true in any public endeavour as in private life—a few individuals may originate a movement—a Muller, a Bernardo—but to carry out a great public scheme requires co-operation. We must in this great venture work together; to influence public opinion and to win public sympathy and support means team work, close and strenuous.

Money must be obtained, and in no small quantities. I am wholly confident that the Canadian people, once the objects, aims and work of the Red Cross are understood, will support it by full and warm sympathy and unstinted contributions. Canadians have never been called upon in vain in any good cause—and this is of the best.

May I, being more closely but not more sympathetically connected with another organization with objects not wholly dissimilar, be allowed in conclusion to bid the Red Cross in this effort, as in all others, a reverent and a hearty God speed.

For assuredly Canada and Canadians will rise up and call it blessed.

The Low Birth-Rate of British Columbia—Some Causes and a Remedy

HERBERT B. FRENCH, M.A.,
Deputy Registrar, Births, Deaths and Marriages, British Columbia

FROM time to time articles have appeared in the Press and elsewhere having reference to the low birth-rate of British Columbia, and, in some instances, gloomy conjectures have been made with regard to the future outlook for the Province.

In treating a patient one of the first things a physician essays to do is to locate, if possible, the cause of the disease, and, if successful in his endeavour, he proceeds to prescribe a remedy. The purport of this article is to try and show that this course has not invariably been followed in regard to the birth-rate of British Columbia, and that as a consequence there has been a waking of a somewhat lively corpse.

In the first place, the use of a crude birth-rate alone for purposes of comparison is likely to give unfair and misleading impressions. Few persons stop to consider the difficulties entailed in the collection of vital statistics. British Columbia has an area of 355,855 square miles—an area but slightly less than the combined areas of the United Kingdom, Norway, and Italy. The population is sparse (1.48 to the square mile) and widely scattered. The physical features of the country, and the consequent lack of adequate transportation and communication do not lessen the task of collection. At the present time, to cover this vast area, the Province has only 75 collectors—or one collector to each 4,682 square miles and each 7,276 people. The following table gives a comparison of transportation facilities in the various Provinces:—

TABLE A

	Steam Railway Mileage—1924	*Highway and Road Mileage—1925*	*Motor Vehicles 1924*
Ontario	10,948	52,756	308,693
Manitoba	4,520	27,147	44,322
Saskatchewan	6,942	135,000	70,541
Alberta	4,818	60,053	51,148
British Columbia	3,975	16,664	48,626

Another fact that must be borne in mind is that the principal industries of the Province being mining, logging, and fishing, the population is to

a great extent migratory, and the work of collection thereby rendered more difficult than in permanently settled districts. That all the births in the Province are not registered is shown by the number of delayed registrations which are received, averaging from 1,500 to 2,000 yearly.

Another point to be kept in view regarding the birth-rate is sex distribution. The following figures are taken from the Sixth Census of Canada, 1921:—

TABLE B

	Males	*Females*	*Males*	*Females*
Quebec	1,180,028	1,181,171	—	1,143
Manitoba	320,567	289,551	31,016	—
Saskatchewan	413,700	343,810	69,890	—
Alberta	324,208	264,246	59,962	—
British Columbia ..	293,409	231,173	62,236	—

While in British Columbia in 1921 there were only 773 females of the ages 15 to 44 to every thousand males of a like age, there were in Quebec and Prince Edward Island respectively 1,017 and 986 females to every 1,000 males.

Again, the ages at which marriages take place must naturally have some bearing on the birth-rate. In the table which follows it will be seen that the percentage of grooms and brides over the age of 30 is considerably higher by comparison in British Columbia than in the other Provinces:—

TABLE C

Grooms	*Man.*	*Sask.*	*Alta.*	*B.C.*
Under 20 years	1.4	1.4	1.3	1.2
20-24 „	29.4	31.6	28.8	26.2
25-29 „	32.7	31.6	30.4	27.2
30-34 „	16.5	16.4	17.7	17.7
35-39 „	8.7	9.5	10.8	11.3
40 years and upwards	11.3	9.4	11.0	16.4

Brides	*Man.*	*Sask.*	*Alta.*	*B.C.*
Under 20 years	26.4	33.4	29.7	16.5
20-24 „	38.5	38.5	39.7	40.3
25-29 „	18.9	14.8	14.9	19.9
30-34 „	6.9	5.8	6.4	9.6
35-39 „	4.2	3.2	4.6	5.4
40 years and upwards	5.2	4.3	4.7	8.3

Another very vital factor in relation to determining the birth-rate is the question of population. Unless more or less accurate records are available regarding emigration, immigration, and inter-provincial migration, the determination of the populations of the various provinces by estimates can only be more or less guess work and unreliable. The three Prairie Provinces have the advantage of a Quinquennial Census, while the other Provinces have only a Decennial Census. It naturally follows that the population of the three Prairie Provinces can be gauged over a five year inter-censal period with a greater degree of accuracy than the population of the other Provinces over a ten year inter-censal period. That errors in estimates of population are possible even in a five year period is shown by the following figures:—

TABLE D

	1926 Estimate	*Census 1926 to nearest 1,000*	*Error in Estimate*
Manitoba	665,000	639,000	26,000
Saskatchewan	850,000	821,000	29,000
Alberta	667,000	608,000	59,000

Taking the case of Alberta, the use of the estimate of population 1926, in place of the Census, 1926, would mean a reduction of approximately 2 points in the birth-rate. It follows, therefore, that to use Census figures for certain Provinces while using estimates for other Provinces precludes the possibility of making fair comparisons.

The decline in the birth-rate in the past few years is by no means peculiar to Canada—all white races appear to have suffered similarly. Judging from the table which follows, it is apparent that in the five year period 1921–1925 the decline in the birth-rate of British Columbia has been less marked than in other Provinces. In this table rates are based on estimated populations for all Provinces:—

TABLE E

	1921	*1922*	*1923*	*1924*	*1925*
Prince Edward Island	24.3	24.5	22.5	21.1	19.2
Nova Scotia	24.9	24.0	22.0	22.1	21.2
New Brunswick	30.2	29.5	27.0	26.9	27.1
Ontario	25.3	24.0	23.2	23.4	22.6
Manitoba	30.3	28.2	25.9	23.9	22.7
Saskatchewan	29.7	28.4	26.3	26.4	24.6
Alberta	28.1	26.5	24.3	22.9	22.9
British Columbia	20.3	18.9	18.4	18.3	18.1

Again, a high birth-rate does not in itself entirely constitute the welfare of any country—due consideration must be given to the death-rate. The death-rate for British Columbia during the five year period 1921–1925 varied between 8.0 and 9.8 per 1,000 population—a rate which cannot be regarded as excessive. A reference to the table which follows, dealing with infant mortality, would appear to show that British Columbia is particularly fortunate in conserving a very large proportion of her births.

TABLE F

	1920	*1921*	*1922*	*1923*	*1924*	*1925*
Prince Edward Island	80.0	83.5	70.8	89.0	71.6	69.4
Nova Scotia	116.6	100.7	97.6	97.5	94.7	77.8
New Brunswick	134.9	113.3	103.3	106.0	102.5	100.3
Ontario	103.7	91.2	82.9	84.9	75.8	78.9
Manitoba	102.7	83.0	94.4	85.7	75.9	79.6
Saskatchewan	85.7	80.6	85.6	91.9	75.9	81.0
Alberta	93.5	84.0	91.3	94.2	84.1	75.2
British Columbia	60.8	56.5	68.1	66.8	56.7	55.1
Quebec	163.7	128.3	127.8	137.8	—	—

It may also be noted that during a period when business conditions have been somewhat unsettled, and a considerable exodus has taken place to the United States, British Columbia appears to have been more successful in retaining her population than other Provinces, as the following table will show:—

TABLE G

	Maritime Provinces	Ontario	Manitoba	Sask.	Alberta	British Columbia	Quebec, 1921, 1922, 1923 Only	Total excluding Quebec
CENSUS—1921	992,356	2,933,662	610,118	757,510	588,454	524,582	2,361,199	6,406,682
NATURAL INCREASE (5 yrs)	62,318	357,215	56,209	78,516	52,544	27,083	158,665	633,886
IMMIGRATION (5 yrs)	23,966	238,798	60,813	58,513	59,786	48,784	44,167	490,660
POPULATION—1925	1,078,640	3,529,675	727,140	894,739	700,784	600,449	2,564,031	7,531,427
CENSUS—June 1, 1926	1,027,000	3,103,000 (Estd.)	639,000	821,000	608,000	561,000 (Estd.)	2,578,577	6,759,000
(3 Prairie Prov.)								
LOSS—(By emigration)?	51,640	426,675	48,140	72,739	92,784	39,449	*Inc* 14,546	731,427

That the apparently low birth-rate of British Columbia can be raised admits of little doubt. As shown above, many obstacles stand in the way of obtaining complete returns, *e.g.*, the great distance at which a large proportion of the population resides from Registry Offices, and the difficulty of disseminating information of the provisions and requirements of the Act over so vast and sparsely settled country. Increased facilities for registration are required, and the general public should be educated to realize that registration of the births of their children is

not only a duty they owe to their children, but is also a positive advantage. The Clergy, Doctors, Hospital Authorities, and School Teachers could all render invaluable assistance in this work. Public notices re registration should be posted in all Post Offices and other public buildings. This, with an increased number of registration offices, would undoubtedly have a marked and immediate effect on the birth-rate.

In conclusion, the writer of this article has few qualms in regard to the future welfare of British Columbia, but is confident that the time is not far distant when the empty spaces will begin to fill—transportation and communication rendered easier, and *"Splendor sine occasu"* will remain a fitting motto for a prosperous and contented people.

The Antisyphilitic Pharmacopoeia of Fracastorius

By The Honourable William Renwick Riddell, LL.D., D.C.L.,
President, Canadian Social Hygiene Council

(Having left untranslated many of the terms employed by Fracastorius, I here collect and explain them.)

(*Continued from May.*)

Merulae, Merles, Blackbirds—as a fish, the sea carp. Pliny, *Nat. Hist.* 9, 20: 32, 53, mentions it among the fish of the rocks and praises it—the Merle (N. E. Dict. *sub. voc.* 2) Cook-fish, Scarus varius, French Merlot or Merlet.

Minium at that time generally Native Cinnaban or Vermilion. See Cinnabar *ante* (now Red Oxide of Lead), $Pb_3\ 0_4$.

Mithridatium (-um, -e) an antidote against poison, said to be due originally to Mithridates, King of Epirus. In an article in the New York Medical Journal for September 27, 1919, *Medical Theory and Practice of an Eighteenth Century Doctor of Divinity*, I had written a full note on this remedy, but finding the following in a popular magazine, I copy it as sufficiently full and accurate:

"Mithradatium was the name of the great antidote of Roman Pharmacy. It had from forty to fifty vegetable ingredients, few of which had any real medicinal value except opium, and these drugs were blended with honey. It remained for Nero's physician, Andromachus, to put the finishing touches to this wonderful compound. Andromachus added viper's flesh to the formula, and called his new compound Theriaca. He wrote many verses dedicated to Nero, describing this medicine, and claiming virtues for it . . . . Evidently he believed that he had created in this one compound a veritable pharmaceutical monopoly. Galen, one of the fathers of medicine, went even further. He recomnended it as a cure for all poisons, bites, headaches, vertigo, deafness, epilepsy, apoplexy, dimness of sight, loss of voice, asthma, coughs, spitting of blood, tightness of breath, colic, the iliac passion (appendicitis), jaundice, hardening of the spleen, stone, fevers, dropsy, leprosy, melancholy, all pestilences, etc. As

Galen's writings dominated medical thought for one thousand five hundred years, it is not surprising that this advertisement made Mithradatium, or Theriaca, a valued remedy. Every physician of note for centuries afterwards claimed some improvement of the original formula". It was called Mithridate (or Mithridatium) from being supposed to be based upon the medicines which Mithridates VI, the celebrated King of Epirus, took as a prophylactic against poison. Some of the modifications or improvements of this original medicine were sufficiently extraordinary; one very famous physician, Pietro Andrea Mattioli (Mathiolus), of Florence, 1501-1577, put six score, 120, ingredients in his elixir. It was called *Theriaca* or *Theriac* from the Greek *Ther* or *Therion*, a wild beast, as it was considered a specific against poisonous bites of beasts and serpents, and from its great improver *Theriaca Andromachi*. Through a corruption of the Old French it became known in English as *Treacle*—from its supposed place of manufacture it was called *Theriaca Venetiana* or *Venice Treacle* (See "The Sister Profession", *Canadian Journal of Medicine and Surgery*, July, 1912).

Complaints were always being made that the Real Venice Treacle was not supplied by the apothecaries, the fact seeming to be that every physician, surgeon and apothecary made a nauseous mixture after his own formula and called it Venice Treacle, a species of fraud unknown to our own modern druggists, who never palm off something "just as good".

Muscus (-um) may be either Moss or Musk, here probably the latter—although the former is the classical sense as used by Horace and Ovid. Horace, Epodes 1, 10, 7. Ovid, Metamorphoses 8, 562.

Myrrha: Myrrh, Gum resin from several species of Commiphora or Balsamodendron, especially Commiphora Myrrha.

Myrrhae Lacrimae: dried drops of Myrrh. Celsus has many references to Myrrh, as has Pliny. Dios. 1, 67, gives it many virtues. Les. p. 65, speaks of it as one of the gifts of the Three Kings: and that Joseph and Nicodemus made a precious ointment of it after Christ's death—it "dissolves, strengthens and consumes, purges the head of humor, catarrhs and other pains of temples, teeth and gums—to women a thing propitious,

"Retenant sperme en la matrice
Combien que ce soit chose immonde
Nous en sommes et tout le monde."

Quincy, p. 76, helpful to stomach, removes agues, excellent in malignant and pestilential fevers, an excellent dentifrice emmenagogue, ecbolic and anti-hysterical.

Nabathaeum: Nabathaean Thus—see Thus, *post.*

Narcissus: Narcissus pseudo-narcissus, Daffodil, Celsus, 5, 11, seed is discutient, 5, 15, and (with root) is emollient.

Pliny, *Nat. Hist.*, 21, 12, 38, gives two kinds, one with purple flower and the other herbaceous—stomachic, laxative, vomitive.

Dios. 4, 142, cleanses ulcers and abscesses, checks concoction.

Culpepper, pp. 160-162, cleanses corrupt and rotten ulcers, a good poultice.

Quincy, p. 214, not now used in medicine.

Nitrum: Nitre, Saltpetre, KNO_3, impure and native.

Nux Amara: Bitter Almond.

Nux Muschata or Nux miristica (Nux aromatica): Nutmeg.

Les. p. 70, makes it stomachic, "causing joy to intestines, brain and liver".

Nympheae: Nymphaea Alba and Nymphaea odorata, our White Water-Lily, now sometimes called Castalia odorata.

Dios. 3, 126—the root for stomach pains, alopecia, "insomnia veneris", this is the Alba. The Nymphaea lutea shown is a Nenuphar.

Culpepper, p. 223, the leaves cure Ague and all inflammations.

Oenanthum (Oenanthe): Oenanthe crocata—Hemlock dropwort. Celsus 3, 21, diuretic: 5, 5, purgative: 5, 8, caustic: 5, 28, 3, exedent.

Dios. 3, 115 ejects the secundae, diuretic: 5, 3, for receding gums, &c.

Oenothera: Oenothera biennis, Common Evening Primrose—mucilaginous and slightly acrid.

Oenantilla; apparently a name for the Pimponella, *sed qu*?

Oesypus: a kind of greasy ointment derived from the oily wool which grows on the throat and the inner part of the thighs of sheep. Pliny, *Nat. Hist.*, 29, 10, 38, uses it for an eye ointment: 29, 36, for headaches: 30, 27, for epilepsy: 30, 30, for dropsy: 30, 32, for erysipelas: 30, 23, for gout: 30, 48, to produce sleep: 30, 39, to heal wounds. Celsus, 5, 19, 10, an ingredient of a plaster for broken head: 6, 18, 17 and for *ani mala.*

Dios. 2, 68, emmenagogue, ecbolic, heals ulcers, especially "sedis vulvaeque", &c., &c.

Oleum: oils of different kinds, *e.g.*, Oleum Laurinum, Oleum Rosaceum, Oleum Rosatum, &c., &c.

Olus: generic name for garden vegetable—here probably Spinach.

Omphacium: wine from sour unripe grapes, Verjuice, a constant menstruum. Celsus has many references to it. Dios. 5, 4, describes it and gives many of its qualities for tonsils, uvula (which he calls

"uva"), ulcers in the mouth, humid diseases of the gums, fistulas, &c., &c.

Les. p. 99, is equally laudatory.

Onobrychis: Onobrychis sativa, Common Sainfoin, called in Latin also Palmes asini.

Opoponax: from the Pastinaca Opoponax, Ferula Opoponax, Panax Costinum, &c. the Panax Heraclea of the old botanists and now rejoicing in many names. Opopanax or Lachrymae panaceae was a well known gum imported in large tears, yellow without, white within, obtained by the incision of the trunk of the tree Panax, &c. which grows in Macedonia, Boeotia and other parts of Greece.

Celsus 5, 18, 5, makes Opoponax an ingredient of the malagma of Lysia, 5, 23, 1, an antidote: 5, 23, 3, an ingredient of Mithridate; 6, 6, 25 of the Sphaerion (*i.e.* pill) called Asclepian: 6, 7, 1, of an ear medicine. Dios. 3, 50, gives us Pastinaca Gallica, a Daucus, *i.e.*, red Carrot.

Origanum: Origanum Majorana, Sweet Marjoram.

Oryza: Oryza sativa, Rice.

Os Cordis (or e Corde) Cervi. Bone from a stag's heart. Quincy, 167, says "The strange conceits of the medicinal virtues of this drug are too numerous and too ridiculous to mention here and . . . . it is . . . . now justly expelled the present practice"—it was still officinal, 1749, as a diaphoretic.

Oxalis: Oxalis Acetosella, true wood-sorrel, same as Acetosa, q.v.

Oxyacantha: Berberis vulgaris, Common Barberry of Europe—our Barberry is the Berberis Canadensis, Wild Barberry or Snowberry, and differs slightly from its European sister. The European species is sometimes called Oxyacantha Galeni.

Dios. 1, 105, treats of it under the name Acuta spina—constipant and menorrhagic.

Les. p. 100, Vinatier, Berberis "called Oxyacanthos in Greek" gives it the same qualities: the modern French name is l'Epine Vinette.

Culpepper's Barberry, p. 73, and Quincy's, p. 135, have the same qualities.

Oxycratum: a mixture of vinegar and water used as a cooling drink.

Oxylapathum: properly the Rumex acetosella, Sheep sorrel, but sometimes improperly used for the Acetosa, q.v., *ante*.

Oxymel: Honey and Vinegar boiled to a syrup.

Oxys: Acetosa, q.v., *ante*.

Panicum: Panicum Italicum, Italian Panic, seeds used in Italy for

soups, &c. Panicum Milliaceum is Millet. Dios. 2, 90: Panicum-like Millet and is used for bread—this seems to be Sesame.

Pastica: Fatted cattle—meat pies.

Pentaphyllon: Potentilla reptans, Common Cinquefoil: Dios. 4, 33, describes it as useful in epilepsy and jaundice, antidote to pains, &c. Celsus, 2, 33, repressent and emollient: 4, 15, useful in dysentery, and, 6, 9, for toothache.

Culpepper, pp. 124, 125, in all inflammatory fevers whether infectious or pestilential, sore mouths, cankers, &c., &c.

Quincy, p. 139, astringent and vulnerary, cures coughs, palsy, gout, jaundice, obstructions of liver and spleen, &c., &c.

Percae: the Perches.

Perdices: the Partridges.

Persica: Amygdalus (or Prunus) Persica, the Peach.

Personacia: Celsus has, 5, 27, 10, "personina", in some texts, "personata": the word is not found in any form in Dioscorides.

There is a great deal of doubt as to the identity of plants bearing this name or some name near to it in sound.

Although the very elaborate and valuable Harper's *Latin Dictionary*, N.Y., 1898, does not define "Personacia", yet under the word "Prosopis", it says "Prosopis, Prosopites, a plant (pure Lat. Personacia)."

Pliny, *Nat. Hist.*, 25, 9, 5, 8, says: "Quidem echion personatam, vocant cujus folio nullum est latius, grandes lappas ferentem"—*i.e.*, some call the Echios, Personata, there is none wider in the leaf: it carries large burs. Some of the commentators make it the same as Lappa major, the variety of Lappa officinalis which is our common Burdock. The Echios, however, seems to have been a Bugloss or Borage.

I have no doubt that the Personata was our Burdock: I do not agree with those (v. Harper's Latin Dictionary, *sub voc. Personata*) who identify Personata with Persolata. Pliny, *Nat. Hist.*, 9, 66, says: "Persolata quam nemo ignorat Graeci vero arcion vocant, folia habet majore etiam cucurbitis et hirsutiora, nigrioraque et crassiora, radicem albam et grandem. Haec ex vino bibitur denariorum duum pondere"—Persolata, which as is well-known, the Greeks call arcion (arkeion), has leaves still larger and more heavy, darker and thicker than the gourd; and has a large white root. It is drunk with wine, two drachms by weight. (Galen calls the plant "Arktion", *De Fac. Simp. Med.*, Lib. vi, p. 159; and others "Acturus"). It is true that both Arkeion and Prosopis have been identified with our Burdock; but Pliny's description of Persolata does not suggest burs.

It is not worth while pursuing the statements of Apuleius and the Commentators.

Peucedaneum: Peucedaneum officinale, Hogs' Fennel, Sulphurwort: there are other species not always distinguished: Peucedaneuum is a name for the English Saxifrage.

Celsus, 5, 18, 29, makes it a topical application for joints.

Pliny, *Nat. Hist.*, 25, 70, gives it power against serpents; 26, 70, healing epilepsy: 26, 83, styptic: 26, 87, desquamatory bones, &c., &c.

Dios. 3, 74, drives away serpents; ecbolic, desquamatory bones, &c., &c.

Phasianae: Pheasants.

Phycides: The phycis is said by Pliny, *Nat. Hist.*, 9, 26, 42, to change its color: in the spring parti colored, white the remainder of the year: 32, 53, it is one of the rock fish. Some guess the lamprey, others the perch. Of course the word means "seaweed dwellers."

Phyllitis: Polypodium Phyllitidis, Hart's Tongue.

Dios. 3, 102, against serpent bites and those of quadrupeds, dysentery.

Pillulae: Pills of various kinds.

Aggregative, containing the principles of many drugs: *e.g.*, Charas, p. 299, gives a formula containing Socotrine Aloes, Terebinth, Dacridium, Rhubarb, Myrobalans, Alkandal, Agaric, Polypodium, Red Roses, Mastich, Epithymum, Ginger, Gemmei Salis, Anise-seed, Eupatorium, Absinthe, and Mellago.

Arthritic were for Gout.

Hermodactylorum were Colchicum.

Indi from a supposed East Indian Formula, &c., &c., &c.

Pimpinella: here the Poterium Sanguisorba (or Pimpinella saxifraga or magna.), Tragoselinum, Burnet-not however our Canadian Burnet, which is Poterium Canadense (or Sanguisorba Canadensis). Pliny, *Nat. Hist.*, 22, 30, calls the Adiantum a Saxifragum. See also Dios. 4, 120, notes: 3, 62, where a plate is given.

Piper: Pepper.

Plantago: Plantago major, the Plantain. Celsus, 2, 30, makes it astringent. 3, 32, good for phthisis: 4, 4, 5, to be taken before venesection. Dios. 2, 119, for old ulcers, mad dog bites, burns, scrofula, &c., Les., p. 75, mad dog bites, cleans wounds, vermifuge, diuretic. Culpepper, p. 203, stays fluxes, cures phthisis, coughs, helps in bites of mad dogs, serpents, &c., vermifuge, cures tetters, ringworms, &c.

Quincy, p. 84, great cooler and stopper of fluxes. "'Some have strange notions of its resisting poisons, and Tacker tells us that a toad before she engages with a spider will fortify herelf with some of this plant and that if she comes off wounded she cures herself afterwards with it".—which rather overshadows Dioscorides' modest praise.

Polygonatum: Polygonatum uniflorum—Solomon's Seal—our Solomon's Seal is Polygonum biflorum. Celsus, 2, 32, makes it repressent and emollient. Dios. 4, 5, a vulnerary and cosmetic.

Culpepper, p. 336, vulnerary—"the distilled water . . . . cleanseth from morphew, freckles, spots or marks whatsoever leaving the place fresh, fair and lovely, for which purpose it is much used by the Italian ladies and is the principal ingredient in most of the cosmetics and beauty works advertised by perfumers at a high price".

Polypodium: a large genus of Ferns amongst them, the Common Polypody, Filicula dulcis or Sweet Fern, a cephalic and cholagogue. The Polypodium Phyllitidis, Hart's Tongue, is said to come from Tropical America; but it may be meant here—the Scolopendrium, however, came to us from Europe. The Aneimia—Phyllitidis is another Fern, but it came from South America. "Syphilidis", Lib. II, v. 180, "pictam Phyllitida" "the painted phyllitidis", by reason of the bright streaks of red on it. Dios. 4, 166, has "Filicula sive Polypodium", a purgative for bile and phlegm, also for cracks between fingers. This is the Polypodium quercinum.

Les., 73, "Grec polipodion quercin
Felicule dict en latin
Purge le flegme et la colere
Et membres desjoinctz reinsere"—

which is the same in old French.

Culpepper, pp. 295, 296, says much the same in English.

See Filicula, *ante*.

Pomatae: Medicines in which Poma, fruit of the Apple Family, formed a chief ingredient.

Prassus: Leek, now called Allium Moly or Allium Sativus. Dios. 3, 45, "ad aperiendas uuluas".

Precipitate: both Red and White Precipitates of Mercury were in use: where Red is not specifically mentioned, the White is meant.

Psilothris (-um) Bryonia alba, Bryony. q.v. *ante*.

Psyllium: Plantago psyllium, Plantain. q.v. *ante*.

Pulegium is Mentha Pulegium, the English Pennyroyal—our Pennyroyal is also a mint, Hedeonia pulegioides.

Celsus, 2, 32, a somniferent; 2, 33, repressent and emollient: 4, 11, to purge bile: 5, 5, an aperient. Dios. 3, 30 purges bile, against serpent bites, dries gums, helps in gout, mitigates pruritus—"Some call it blechona because when it flowers being eaten by the flocks, it excites bleating" (balatum).

Pulli Gallinacei: Barndoor chickens.

Pulmonaria: Philomis tuberosa, Jerusalem sage (Pulmonaria officinalis). Dios. 4, 43, deals with it as a Hepatica, Liverwort.

Pyretum (properly Pyrethrum): Anthemis pyrethrum or Achillea ptarmica. Pellitory.

Pyrites: Copper Pyrites or sometimes Iron Pyrites. Celsus, 5, 11, makes it discutient; 5, 17, B. 14, useful against struma.

Dios. 5, 89, "calfacit, terget, digerit".

Quaternix or Coternix: a kind of Partridge.

Resina Abietina: Pine tar or resin.
do Cedria: Cedar do
do Laricina: Larch do
do Terebinthina: Turpentine.

Rhamnus: The common Buck thorn, Rhamnus Catharticus.

Dios. 1, 102, leaves good in erysipelas and snakebites.

"The story goes that if branches of it are attached to the windows it will keep away sorceries."

Culpepper, p. 98, good for warts: Quincy, p. 183, good for purging and in gout.

Rhubarba: Rheum Rhaponticum, Rhubarb.

Dios. 3, 2, Rha, Rheum or Rhaponticum good for nearly every disease.

Rhaponticum is simply Pontic Rha and Rhubarb, Barbarian Rhu.

Lis., p. 76, do not use it without the advice of an expert physician. It mundifies and purges choler, phlegm and lung. Good in dropsy and jaundice. . . ."

Culpepper, p. 324, and Quincy, p. 139, are not enthusiastic about it.

Rosatum Mel: Honey with Rose water or Rose Essence.

Rosatum—Oleum: Oil (generally Olive oil), with Rose Water or Rose Essence.

Rubia: Madder, Rubia tinctoria (or sativa).

Rutae: Common Rue, Ruta graveolens.

In his work "De Sympathia et Antipathia", Chapter I, Fra castorius says:—Brassicae et rutae tanta inimicitia est ut juxta seri nolint"—Between cabbages and the rue there is such antagonism that they cannot be sown together; and in Chapter IX, he gives the reason. That in addition to the ordinary enmity of different species "fortasse putandum est accidere quod utraque calida est et crassarum vadicum, quare quum multum humidi quaelibet ad sese trahit, fit tandem ut juxta satae prae humoris inopia arescant". It perhaps is to be supposed that each is hot and with crass roots, consequently when either draws much moisture to itself it happens that the plants sown near by dry up for want of water. Celsus has many references to it. Dios. 3, 43, gives it many virtues, antifebrile, vermifuge, for sore eyes, nosebleed, inflammation of several parts, eruptions of papillae, warts—"They say that if sprinkled on hens it will keep away cats"—the seed of the mountain Ruta is called Moli—useful in epilepsy, emmenagogue, ecbolic, &c., &c.

Les., p. 78, Peganon in Greek is the Rue, abortifacient, constipating, antidote, good for cough, lungs, dropsy, vermifuge, antifebrile.

Culpepper, p. 328, counter poison against the plague, cures morphew, warts, &c.

Quincy, p. 75, allows it as good in nervous cases.

Rutulae: Fish, Auratae, q.v., *ante*.

Sal Gemmae: Sodium Chloride, Common Salt, Na Cl.

Salvia: Salvia officinalis, Sage. Dios. 3, 32, cleans wounds, heals ulcers, cures "testium pruritus".

Samia (Samia Terra): Samian Earth, an argillaceous earth found in the Island of Samos, similar to and with the same supposed medicinal qualities as Lemnian Earth, q.v., *ante*—See also Sphragis, *post*—or it may be Samius Lapis, Samian stone, much the same, if not the original form, supposed to be astringent and absorbent.

Sandalum (i): Pterocarpus santalinus, Red Sanders, and Santalum Album, Yellow Sanders.

Sandaraca (cha) (A): Realgar, Red Orpiment, Auripigmentum, q.v. *ante*.

Celsus, 5, 5, a purgative: 5, 6, a caustic: 5, 7, an exedent, &c., &c.

Dios. 5, 71, used as a suffitus in chronic coughs, heals ulcers, &c. He identifies it with Auripymentum in 6, 29.

Les., p. 91, speaks of this, but says that when Sandarach is spoken of, you should think of the Sandarach which is "the tear of the Juniper". See Sandaraca (B) *post*. He speaks of the Realgar under the name "Riagal" at p. 12, as very dangerous and violent.

Sandaraca (B): Gum Juniper from the Thuja aphylla.

Sardellae: a small Mediterranean fish like the sardine—the Sardelle, Clupea (Sardinella) aurita—it is prepared like the sardine.

Satureia: Satureia hortensis—Summer Savory. Dios. 3, 36, good for old men with same qualities as Thyme.

Scabiosa: Scabiosa arvensis; Scabious—Dios. 4, 10, calls it Stoebe, an ointment for sore eyes.

Scarus: the Parrot Fish (Scar, Scarfish, Scare, Scaro) Sparisoma cretense, of the Mediterranean. It was formely believed to be a ruminant and its liver had marvellous virtues as a de-obstruant, useful in jaundice.

Schaenanthus: Schinanthus, Juncus odoratus, q.v., *ante*.

Scilla or Scylla: Squill—the officinal is Scilla Maritima which grows in sandy places in Southern Europe, Spain, Portugal, Sicily, &c. There are two kinds, the red and white, so called from the colour of the bulb, which is the part used medicinally. Dios. 2, 164, gives it the well-known virtues, laxative, diuretic, good for coughs, dropsy, &c., and adds, "The whole plant hung in the threshold of the extrance wards off the poison of bad medicine".

Quincy, P. 170, very diuretic, laxative, good for dropsy, asthmas, infractions of the lungs, alexipharmic.

Scolopendrium: Scolopendrium officinarum, Hart's Tongue.

Scordium (-on): Teucrium Scordium, Water Germander, a favourite medicine with Fracastorius, see Diascordium, *ante*.

Dios. 3, 106, for inflammations, gout, chronic ulcers, the best from Crete and the Black Sea.

Sena or Senna: Cassia Senna, a well-known drug.

Serapinum or Sagapenum; a bitter red to yellow gum with a garlic-like odour used as an antispasmodic and emmenagogue—obtained from the Ferula Persica. See Ammoniacum, *ante*. Dios. 3, 77, Sagapenum, juice of a Median plant, good for pain in sides and chest, chronic coughs, fevers, &c.

Seris: Cichorium Intybus, Common Chicory, see Pliny, *Nat. Hist.*, 20, 8, 32, "Sersi et ipsa lactucae simillima"—seris is very like lettuce. Dios. 2, 125 treats of "Deris sive Lutybus".

Sideritis (Syderitis): Achillea Millefolium, Common Yarrow, Nosebleed or Milfoil. Pliny, *Nat. Hist.*, xxv. 5, 19, speaking of the means whereby Archilles, disciple of Chiron, treated wounds and whereby Telephus also was said to be healed—says that some say it was by aerugo (verdigris), but others say by another panacea—"Aliqui et hanc panacem heracleon, altii sideritin, et apud nos millefolium, vocant".

"And some call this panacea heracleon, others sideritis, with us millefolium".

Apuleius, c, 88, and Dios. 4, 28, agree that the Achilleon or syderitis was the Latin Millefolium, our Yarrow. Dios., styptic, good in fluxes and dysentery.

Sigillata Terra: Lemnian Earth. q.v. *ante*—see also Sphragis, *post*.

Sisymbium: Sisymbrium officinale, Common Hedge-Mustard. Dios. 2, 121, gives it also the name, serpillum sylvestre; it is diuretic, calefacient and cures diseases of face. In 3, 33, he treats of a Mentha, but figures also the Sisymbrium.

Sium: French La Berle: there are several kinds with the same properties, they are eaten and are also taken in a decoction. Sium lineare, water parsnip, has leaves and roots poisonous.

Fracastorius, "Syphilidis", Lib. II. v. 149, says.

"Et Sia fontanis semper gaudentia rivis"—

and the Siums ever delighting in the streams from fountains.

Smaragdus: the Emerald.

Smyrnium: Smyrnium Olusatrum, Hipposelinum; Alexander's, (Alsander's) resolvent, diuretic and emmenagogue.

Dios. 3, 63, in Cilicia called petroselinum for snake bites, constipating, abortifacient, seeds good for diseases of spleen, kidneys and bladder, &c.

Solatrium hortense: perhaps Rosa Solatii, Rosa Solis, Rose of Solace, Drosera volucerifolia, Sundew, used in making cordials. "Solatura" was used in mediaeval times in the same sense. "Pulueres et siliquae granarii" (from the Italian "Solaro").

Sonchus: French Laitron, Sow Thistle, Sonchus oleraceus—the Sonchus asper was used in a decoction, the oleraceus as a vegetable; they have the same properties.

Fracastorius calls the Sonchus, Lib. II, v. 148, "toto florentes frigore sonchi"—flowering the whole winter; but in our Continent,

it flowers in the summer only. Dios. 2, 124, has two kinds, the sylvestris and the sativus, good against scorpions, inflammations, &c.

Culpepper, p. 349, for strangury, lithontriptic, a good face wash.

Sphragis, Lemnian Earth, Terra Sigillata, so called because the priests of Lemnos obtaining it from caves mixed it with goats' blood and stamped it with a seal (Sphragis, Sigillum) with the image of a goat. Dios. 5, 63.

Squinantum: a variant of Schoenanthus, q.v., *ante*.

Stercus: Dung.

„ Batrachium: Frogs' or Lizards' Dung.

„ Bovinum: Cows'.

„ Columbinum: Doves'.

„ Porcinum: Hogs'.

Stimmi: (Stibium), Tin. Dios. 5, 49.

Stoechas: Lavendula vera (Or Lavendula Stoechas), French or True Lavender.

Dios. 3, 28, for all diseases of the chest and viscera.

Les., p. 81, it "tends to the end of putting the chest in health like hyssop in medicine".

Stratiotes: Achillea Millefolium, Common Yarrow or Milfoil.

See Sideritis, *ante*.

Strigili—a kind of fish (freshwater).

Styrax: Storax, the gum resin of the Styrax officinalis and Styrax calamita.

Styrax liquida: obtained by boiling from the Liquidambar. Styraciflui, sweetgum Tree or Bilsted. (Both kinds were used). Dios, 1, 68, gently laxative, for coughs, &c.

Sublimate: Sublimate of mercury, corrosive sublimate, mercury bichloride, Hg Cl2.

Sulphur: native sulphur: Dios. 5, 73 calls it "apyron" for gout, &c.

Symphituum: Symphyticum officinale, Comfrey, once esteemed as a Vulnerary.

Tamarindi: Pulp of the Tamarindus Indica.

Teda: Pitch.

Terebinthina Abietina: Turpentine from Abies, Spruce.

do Cedria: do from Cedrus Cedar.

do Laricina: do from Larix, European Larch.

do Pinea: do from Pine.

Terebinthus: the tree Terebinth, Dios. 1, 76.

Terra Lemnia: see Lemnia Terra.

Thapsia: Thapsia asclepias, Deadly Carrot—a powerful emetic and cathartic.

Dios. 4, 138, gives it valuable medicinal properties.

Theriaca: "Triacle", our treacle, from "theriacum", an antidote to the poison of "ther" or "therion", Greek for an animal, often a snake. Nero's physician, Andromachus, had a wonderful prescription which he celebrated in Greek elegiacs; his Theriaca was made of vipers' flesh and many plants along with honey, and was the most celebrated "Therica"; his son of the same name, had some 24 remedies for earache, many for toothache, bleeding, etc., and was a pharmacist of renown.

Servilius Democrates, a Greek physician who lived and practised at Rome in the first part of the first Century after Christ, wrote his prescriptions in iambic verse and they ranged from antidota through malagmata (emollient plasters) to tooth powders. The name "Mithridate" was given to the medicine as being based upon the prophylactic against poison used by Mithridates VI, King of Epirus. Every physician of note made his own improvement. Matthiolus (Pietro Andrea Mattioli of Florence, 1501-1577) put 120 ingredients into his special preparation. See Mithridate, *ante*.

Thlaspis—Lepidium sativum, Garden Peppergrass, Pennycress.

Dios. 2, 148, has Thlaspi magus and minus-Lepidium, 2, 167: 1, 147, the editors identify Iberis with Lepidium minus.

Thlaspi is emmenagogue, ecbolic and cholagogue.

Thus—Frankincense, Olibanum Celsus mentions it many times and always with praise. Dios. 1, 70, for verruca, impetigo, styptic even in cerebral haemorrhage, burns, ulcers, inflammations, &c.

Quincy, p. 208, does not think much of it; "anything it is supposed to do is much more likely effected by cinnabar, camphire and such things which are mixed with it" (Dioscorides warns that it is adulterated in transit with pine resin and gums).

(*To be continued*)

Radio Talk

Prepared for the Canadian Social Hygiene Council and delivered at CKCL Broadcasting Studio, Toronto, April 19th, 1927

RED CROSS OUTPOST HOSPITALS

Dr. F. W. Routley

Why is the Red Cross operating Outpost Hospitals in Canada?
Where are these Red Cross Outpost Hospitals?
Who are the people to whom the Red Cross, through these little community Health Centres, is sending expert nurses with their tender care?

WE read of the many hardships and sacrifices of our pioneer forefathers, who by dint of sheer courage and indomitable energy hewed out of the forests of older Canada homes which were the forerunners of the splendid towns and cities which now dot the older districts of this country. We enjoy the heritage which they passed on to us and admire their courage.

Let us stop for a moment to remember that Canada even to-day must be divided into two distinctly different types of country. We mostly think of it as a well settled land with all the modern facilities and conveniences necessary to comfortable living. This is true only of a very small part of Canada, and is the gift of the men and women of vision who settled here from one to two centuries ago.

Vastly the greater part of our country is still either very sparsely settled or totally unsettled. We have had a slight taste only of the great riches in minerals and products of the forest and farm which these districts are capable of yielding.

We Southern Ontarians already are beginning to appreciate slightly the riches which our province possesses north of the Ottawa River.

Do we know that four-fifths of the whole province lies north of North Bay?

If Canada is to reach its true greatness it must be by populating these rich unsettled districts. Every energetic, courageous young man who paddles a canoe and carries a pack into Northern Ontario is contributing no small part towards making this province greater.

The little settlements in all these new districts are far remote from each other.

When the Red Cross began to survey the districts which it felt needed special help in nursing service, we found small groups of settlers living as much as two hundred and fifty miles from any hospital or expert nursing care of any kind.

The Red Cross immediately recognized that here was a field for humanitarian service of the most constructive kind, because not only would it bring help and comfort to our own young men and women pioneers, but it would provide encouragement to thousands of others to follow their trails.

Although it is less than five years since the Red Cross placed its first nurse in a little centre far distant from the bright lights, there are now thirty-eight Red Cross Outpost Hospitals dotting the forest and the prairies of Canada. There are nineteen of these outposts in Ontario. The project is only in its babyhood, and is destined to grow very rapidly and become a great and successful venture in social service and nation building.

Who are the pioneers that the Red Cross is helping in this outpost service? They are mostly our own Canadian born young men and women, of Anglo-Saxon blood, having the same determined natures that the early settlers, our forefathers, had. A very large percentage of them are the boys who served Canada so well in the Great War.

They are not dependent young men and women. They are only willing to accept Red Cross Service because it offers better chances of life and health than could possibly be secured in any other manner. There are only a few of them in each locality, but they are not only willing but keen to do everything in their power to give to the mothers and children a service which means so much. The young woman who marches by the side of her young husband into one of these remote places, knowing full well the burdens she will be called upon to bear, has a courage which is unsurpassed by any other human being.

Practically all of the buildings which are used by the Red Cross as Outpost Hospitals and nearly all of the equipment within them have been supplied out of the pockets and by the energy of the communities which are being served.

The Red Cross Society as a whole provides the nurses and pays the operating expenses during the early periods of administration of these outposts. It is understood that as soon as possible the community will begin to bear a share of the operating expenses. By this policy of close co-operation between the Red Cross Branch in the little settlement where the outpost is located and the Red Cross Society as represented by the Provincial Divisional Office, all the possible forces are brought to bear upon this work.

Permit me to say just here that while no Government anywhere in the world has thus far considered that public opinion warrants its going into the General Hospital business, the Prime Minister of the Province of Ontario and his Government are most sympathetic to the Red Cross Outpost Hospital Service, and by special grants, as far as they feel they are able to give, and encouragement to the Red Cross in every possible way, are playing a large part in the development of Red Cross Outpost Service.

The first step in placing an Outpost Hospital is for the community through some organized group or representative person to ask the Red Cross to go and study the needs of that locality.

A representative from the Provincial Red Cross office then makes a careful survey of the districts as to size, population to be served, facilities for transportation of nurse from point to point in district, financial resources of settlement, etc.

This report is submitted to the Outpost Committee of the Provincial Red Cross, who decide whether a nursing service is warranted in such a community or not.

If the Committee passes favorably upon the application, the Community is asked to provide a building suitable for an outpost. The building may be a small house suitable only for an emergency station and to house the nurses, or in a larger community a building large enough to provide hospital accommodation of from seven to fifteen beds. These local groups are very quick and enthusiastic to rise to their responsibilities in this work. All they need is the encouragement and necessary help which a Canadian wide organization can give them.

The Red Cross has three types of outpost service. First we have in some scattered districts only a district nurse, who does all her work in the homes and schools of the area, without any hospital at all. Then there is the little emergency outpost situated in a small hamlet in the heart of the forest or prairie, where patients may be cared for, if absolutely necessary, but from which the nurses do most of their work in the settlers' cabins and the schools.

The third type is the modest little hospital, in a little larger centre, furnished with standard hospital equipment, in which is being given the best of nursing care, particularly to large numbers of mothers and children.

In all this work the Red Cross is able to command the services of many of the best trained, most conscientious and highly capable nurses that our fine metropolitan hospitals are graduating. The thirst for service and the magic words Red Cross seem to call them to the vastnesses of our wonderful country.

Although this work is only begun, the Red Cross Outpost Hospital Service in Ontario has already cared for over 5,500 patients in Hospital, with a total of over 40,000 hospital days. The Red Cross has also given nursing care to patients in nearly 4,000 homes in these pioneer districts. Our nurses have visited and examined nearly 10,000 children in 390 schools.

The young woman who was driven 25 miles across the ice to be operated upon in one of our little hospitals, and a mother saved to her children, whose life would have undoubtedly been lost had not the hospital been there. This is one of the scores of examples of the humanitarian service being rendered by the Red Cross.

The child who had not walked a step in years because of infantile paralysis, who was brought down to the Sick Children's Hospital and treated, who is now able to earn his own living and take his place in society, is one of the many examples of the real constructive work which is being done for the children of sparsely settled districts by the Red Cross.

The Clinics which are being held in the Red Cross Outposts for children, in which the local physicians and surgeons and dentists are co-operating together with our nurses to treat children for teeth, tonsils and other debilitating diseases, while bringing a rich harvest in the betterment of the health of these children, are also an evidence of the splendid support being given the Red Cross by these professions.

The Red Cross is blazing some wonderful trails in the heart of the forests of Northern Ontario in Outpost Hospital work.

It has come almost to the end of its financial resources. It needs $300,000.00 from the people of Ontario this year if this outpost service and its soldiers and other most necessary work are to be carried on in the true Red Cross spirit.

An appeal for funds is being made on 7th, 8th, 9th and 10th June. I am sure the Red Cross will receive the necessary funds and will go forward to do a greater work than ever in its past glorious history.

The Sanitary Inspectors' Association of Canada

HOUSING AND HEALTH

By ALEXANDER OFFICER, *Cert. Incor. Sanitary Association, Scotland, Tenement and Supervising Inspector; City Health Department, Winnipeg, Man.*

(Read before the Annual Convention at Brantford, Ontario.)

MUCH has been said during the past few years from the public platform, and in the press, as to the need for immigration. While this is probably meant to apply to homesteading, it is too much to expect that all immigrants will settle on the land. Many of these come to our towns and cities, and this condition will doubtless continue. The question then arises, where are these people to live? Few of them are in a position to buy a home right away, and our building and health By-laws do not permit of the erection of flimsy structures and the neglect of sanitary conveniences. Moreover, our climate demands that sufficient protection must be afforded from excessive heat in summer and extreme cold in winter. It is, therefore, evident that it is expensive to build a satisfactory home even if the immigrant had the means. I think we all realize that to-day the construction of dwellings for rent is at a standstill. Many of the rented houses are like second-hand clothing, cast off and requiring constant repairs.

Personal and community hygiene depends in no small measure upon our housing conditions. There will always be a large number of people who cannot afford to purchase a home, and it becomes the business of somebody—civic, provincial, or federal—to see to it that a sufficient number of suitable and sanitary dwellings are available. I have come to the conclusion long ago that housing is just as important as any other branch of the work of a modern Department of Public Health. It seems to me that the time is not far distant when this matter will be forced upon our legislatures. Before the war, there was a shortage of houses in Winnipeg, due mostly to the steady stream of immigration, but since the war the shortage is much greater. The speculative builder was busy erecting dwellings for several years preceding the war. Many of these were of questionable construction, but that is another matter. They were being bought about as fast as they were built. At the close of the war, prices of material were so high that the construction of dwellings came

to a standstill. During the past year or two, the number of dwellings constructed has increased, but not in anything like sufficient numbers. These are being bought by people, many of whom in turn rent out their old homes if they own them. This is about all the accommodation that can be obtained by the laboring man who cannot afford to purchase a home of his own. The housing problem is acute all over Britain and the United States as well as in this country. In Britain, the local authorities, City and County Councils, are alive to their responsibility and have started on the construction of suitable dwellings for rent. The legislation brought before the New York State legislature by Governor Smith has been commented upon by newspapers all over the United States. According to the Literary Digest, the outstanding fact in the New York system, as Governor Smith sees it, is "that the construction of certain types of homes for wage earners of small income is unprofitable under the existing system", and "until this situation is changed, it will be impossible to rebuild the tenement areas which continue throughout the years to be a menace to the health and the morals of the country". The housing problem is to be solved by providing for the borrowing of money at low rates of interest, and the power to condemn old and insanitary tenements in order that large parcels of land may be acquired at reasonable prices. It is not my purpose to discuss this angle of the housing question, but simply to point out that housing is becoming a very vital question, and one that will be sure to receive more attention in the future than in the past.

Size of Building Lots

In a resolution on "Housing" passed at our 1919 Convention, reference was made to this matter, and it was suggested that lots for building purposes should be not less than 33 feet wide. This is a desirable width of lot, for, after all, houses of any size cannot be adequately lighted on the sides in the case of narrow lots. I am of the opinion that there is a demand for small houses built in terraces. It is quite possible to build houses of four rooms in this way, and this is the size of dwelling most needed. In such cases, lots of 25 feet frontage could be used to advantage, especially if there is sufficient depth of lot to permit of lawn and garden plots.

Sanitation and Comfort

In Winnipeg we are fortunate in having very few dwellings without sewer and water connections. In 1925 there were only 324 houses that were not connected to the sewer and water mains. I understand, how-

ever, that this condition does not obtain in many other towns and cities. It cannot be denied that the outside closet is a menace to health, both personal and public, and yet how often do we find people who, for a small saving, will purchase lots on the outskirts of the city and build dwellings thereon. It not infrequently happens that these same people a few years later begin to petition the City Council for sewer and water mains.

In the case of speculative building, we have seen in the past how frequently dwellings have been constructed without due regard to comfort and sanitation. As already stated, in this country much hardship could be avoided if only our dwellings were built in such a manner as to exclude cold in winter and heat in summer. Even where sufficient precautions have been taken to build a fairly sanitary superstructure, we are constantly coming across dwellings erected on flimsy foundations of wood or rough stone, or, what is worse, concrete of a doubtful character. In a year or two, these so-called foundations get out of level and the buildings upon which they rest go out of shape, with consequent cracking of plaster and buckling of floors, walls, etc. If there is no cellar, the plumbing and water pipes become subject to the action of frost. Even where a cellar is provided, unless a furnace is installed, freezing will take place. Then again, what shall we say about the old makeshift cellar with board walls and floor, and without a window or other opening for ventilation and light? Fortunately, these insanitary "holes in the ground" are now very scarce in Winnipeg. Scores of these are being replaced each year, by proper cellars having walls of brick, stone or cement, and with cement floors.

Number and Size of Rooms

As already stated, the houses most in demand are those of four or five rooms, and yet we find that by far the large majority of those that are built for speculation are much larger. In other words, the desire of the average working man to own a cottage is not met, except where arrangements can be made direct with a builder. A recent housing survey of portions of the City of Winnipeg shows that of over 800 dwellings recorded, only 100 were of 4 rooms or less. It is a pity no person, firm or corporation appears to be sufficiently interested to build for sale or rent groups of small cottages, built, say, in terrace fashion. And yet I am convinced that such houses would be largely sought after, if only they were given a fair trial. With regard to the size of rooms, one cannot but be disappointed at the lack of sufficient cubic capacity, especially in the bedrooms of many of our more recently constructed cottages, and this is also noticeable in many of our apartment blocks.

Apartment Blocks

It is with some amusement that we look back to the time of the cave man; but have we advanced so very far after all? Are not many of our apartment blocks just like so many bee hives? They may be satisfactory residences for newly-weds, but surely they cannot be said to be homes suitable for family use. Natural light to the rooms along the sides of these buildings is seldom satisfactory on account of their close proximity to adjoining buildings, overhanging balconies, etc. I have seen apartment blocks in only a few cities in Canada and America, and yet I think those in Winnipeg will compare favourably with any city on the continent, as we have attained a fairly high standard. But, after all, this class of building only affords the means of placing so many more people to the acre, with no proper allowance for adequate sunshine and fresh air. When we come to consider the basement suites of our apartment blocks, we are forced to admit that, after all, very few are really suitable for occupation. They are frequently damp and dark, and when windows are opened, they serve the purpose of permitting dust and dirt to enter the rooms. It may be of interest to state that in Winnipeg every room must have a minimum height of not less than nine feet from the finished floor to the finished ceiling, and that the ceilings of all basement apartments must have a minimum height of at least four and one-half feet above the surface of the street or ground outside of or adjoining the same; also, no room in a basement may be occupied for living purposes without a written permit from the Health Officer.

The Rooming House (So Called)

I suppose we are all familiar with this type of dwelling—the illegal and, in many cases, insanitary tenement. The conversion into tenements of single family dwellings is a problem that we in Winnipeg have had to face for a number of years, and doubtless other cities must have the same conditions. We have not yet found two families occupying one room, but a number of families are apparently content to live in single rooms. While many of these people are compelled by force of circumstances and the shortage of small houses to live in this way, there are a great many who do it through their own choice. It is surprising how many young married people there are who settle down in this way. They rent a small furnished room with a gas plate for cooking their meals upon. For such quarters they may pay from $10.00 to $35.00 per month, according to whether it is an attic room or a room, say, on the first floor. The rent includes water, light and heat charges, but the gas cooker has a meter attached. We frequently find that the gas stove is connected to the meter by means of rubber tubing. Attic rooms that are only suit-

able for storage purposes are often found occupied by families. Many of these rooms, having low, sloping ceilings and only small gable windows, are scarcely satisfactory for bedroom use; but when gas stoves are in use, they are a menace to health. There is also the danger that if fire should occur in such premises, families living in attic rooms would be trapped. In addition, they are in danger of asphyxiation from gas fumes, due to defective and improper connections to gas stoves. Many of these stoves are fitted by incompetent persons, and, as already stated, often the connections are of rubber tubing. Few attic rooms are fit for family use at any time. In winter time, storm sashes are usually screwed on tight, and the inner sashes frozen, so that little daylight and practically no ventilation is available. In summer, these rooms being so close to the roof, are almost unbearably hot.

The following instance serves to show the necessity for frequent inspections. In 1916 I inspected an old frame building, two storeys in height, with attic rooms. The premises contained 26 rooms, and these, not including 4 rooms which had been formed of flimsy lumber in the cellar, were occupied by 13 families consisting of 39 occupants. Families were also found in the attic. Closing notices were served for the cellar and attic rooms. The cellar was vacated and the families removed from the attic. We kept the premises under observation for a few years, but on inspection last year, again we found conditions as bad as on our first inspection. The cellar was again occupied by a family consisting of man, wife, and three young children. The cellar is only 6 ft. 8 inches in height, and of this only 2 ft. 3 inches is above the level of the ground surrounding the building. Two families, consisting of man, wife and two young children in each case, were found living in the attic and occupying one room each. Both rooms were very small, one measuring only 7ft. by 9 ft. 3 inches floor space. The ceiling was only 7ft. in height, and this over only a portion of its area; it sloped down to a wall 3 ft. 6 inches high. There was no accommodation for a bedstead, and, in consequence, the bed mattress was spread on the floor at night and rolled against the wall during the day. Cooking was done on a small electric plate. Our inspection was made during the winter, and we found that, as there was no storm sash, the window was heavily coated with ice and frozen to the frame, so that there was no means of ventilation. The cubic contents of the room was 444 feet—just enough with efficient ventilation for one adult. The room occupied by the other family was a little larger, 8 ft. 6 inches by 9 ft.—but otherwise conditions were similar. We served closing notices and had the cellar and attic rooms vacated again. It is of interest to note that, for the entire premises, the rents collected were $227.00 per month, as against

$134,00 per month in 1916. Most of the furniture was the property of the owner, and the lessee paid $100.00 per month rent for the premises, including furniture.

A complaint of alleged dirty condition of rooms brought to our notice two semi-detached dwellings which had been unlawfully converted to a tenement. There were 26 rooms (13 in each house), and the houses were connected by two doorways cut in the partition wall. The 26 rooms were rented to 20 separate tenants or families, consisting of 35 adults and 14 children. Only two of the families occupied more than one room. The lessee of the premises occupied two rooms and rented out all the others. Cooking was done on gas stoves or plates in most of the rooms. The plumbing fixtures consisted of 3 water closets (1 in cellar), 2 baths, 2 wash basins, and 2 sinks—one set of fixtures in each house. The attic rooms were deficient in light, and the ceilings in same low and sloping. The crowding together of families in the manner described is undesirable from other points of view besides that of health. Individual family life cannot be obtained under such conditions; there is no opportunity for proper housekeeping; there is lack of privacy; morals are blunted, etc.

The above cases also serve to show how profitable house farming may be made. We are not, however, interested in this phase of the question. The crowding together of families in the manner described is a most reprehensible practice. A number of cases have come to our knowledge where a man and wife rented a small furnished room in an attic, and both go to work. Any little clothes washing is done in the evening, the water being heated on the gas stove in the room. In such cases, poverty is not responsible for this mode of living; it is not *need* but *greed*. Several of these occupants have admitted that they are in good financial circumstances. This class prefer to live in conditions such as above in the centre of the city, where they may get the maximum amount of pleasure with a minimum amount of trouble in housekeeping.

The above instances which have come under our own notice in Winnipeg must be common to all large cities. It has been said that "tuberculosis is essentially a disease of ignorance, poverty, bad housing, and overcrowding". When once introduced, tuberculosis is bound to spread in a house where there is a constant coming and going between the members of different families, where all have to use the same plumbing fixtures, where the rooms are overcrowded, where natural light and ventilation is available only by small windows which are too close to adjacent buildings, and storm sashes fixed. It has also been said that bad housing is a great social problem, and this is true; but

it is also a public health problem. We have been endeavoring to lower the mortality rate by Child Welfare and other agencies, at considerable expense to our cities, but bad housing threatens to nullify all our efforts. Veiller, in his splendid book on housing reform, states: "No housing evils are necessary; none need be tolerated; where they exist they are always a reflection upon the intelligence, rightmindedness and moral tone of the community".

Monthly Jottings of the Sanitary Inspectors' Association of Canada

The President, Mr. E. W. J. Hague, addressed a meeting of the Toronto Sanitary Inspectors on Saturday, June 4th. The object of the meeting was to interest the Toronto Staff in the work of the Association, especially in view of the fact that we are to hold our Annual Convention in Toronto on September 14th, 15th and 16th.

There was a good attendance. Mr. Hague briefly reviewed the history of the Association and the good which has been accomplished by it, pointing out that in all the large centres where former Conventions have been held—Winnipeg, Regina, Calgary, Saskatoon, Edmonton, Ottawa, Fort William, and Brantford—much interest has been aroused in public health work. The high quality of the addresses delivered, many of them by our own members, convinced those present, which usually included Mayors, Aldermen, Health Officers, and other men prominent in public health work, that the Association is of benefit to the Community.

Mr. Hague also referred to the good work done in the Provincial Branches and local Centres, pointing out that the effect of our work has been to raise the status of the Sanitary Inspector by means of lectures, private study, the conducting of examinations, the encouragement of the members to take part in the discussions and to write papers. Also that the Association had been instrumental in the Province of Saskatchewan and in the City of Winnipeg in securing legislation which prevents the appointment in future of unqualified persons as Sanitary Inspectors.

He pointed out that public health workers in all branches may join our Association, including Communicable Disease men, Food and Dairy Inspectors, Veterinarians, Sanitary Inspectors, Laboratory workers, Public Health Nurses, etc.

Another advantage of belonging to our Association, he stated, lies in the fact that every member is also a member of the Canadian Public Health Association, receives a copy monthly of the PUBLIC HEALTH JOURNAL, which is our official organ, and that the Association has three representatives on the Executive of the Canadian Public Health Association.

It was urged that the low estimate of the abilities of Sanitary Inspectors formerly prevalent in many places had been largely due to the appointment of persons not qualified, and in many cases quite unsuitable, for the position, but that this is now being gradually changed through the efforts of the Association.

The Inspectors were told that they should be classified as technical experts and paid accordingly. Mr. Hague mentioned a few of the things with which Sanitary Inspectors are required to be familiar, such as water purification, building construction, plumbing, housing, sewage disposal, lighting, ventilation, offensive trades, industrial hygiene, milk, foods, communicable diseases, child welfare work, vital statistics, etc. He said that as soon as we can convince authorities that we do know a good deal about these subjects,—that in fact we *must* know them if we are to do our work properly; and further, if we can show that we have to study and pass an examination before appointment, we shall then have good grounds for asking for classification as technical experts and may expect to receive a salary commensurate with our abilities.

Mr. Hague said that it was not the desire of the Association to require that Sanitary Inspectors of long experience, already holding positions, should sit for qualifying examination, unless they so desire; but that for all future appointments a certificate should be required. The meeting was then told something of the success of the Sanitary Inspectors' Association in England with its 2,000 members, excellent monthly journal, and the live centres in all parts of England. He stated that the Association was recognized and consulted by the Ministry of Health when health legislation was under consideration. Similarly in New Zealand, Australia and South Africa the Sanitary Inspectors are bound together in associations having similar objects to our own. He said that Canada should not be behind in this good work, and that the Province of Ontario should take its proper place as the leading Province of the Dominion. As for the City of Toronto, there should exist there the strongest local branch in the Dominion, and he made a strong plea for the active co-operation of the Toronto men,—especially in view of the fact of the coming Convention in their City.

At the close of the President's address some discussion took place and questions were asked.

It was suggested by some that the subscription fee of $5.00 per annum is too high. Mr. Hague pointed out that the cost of the JOURNAL and

affiliation with the Canadian Public Health Association is about $1.75 per member and that the subscription fee could only be reduced to $3.00 —which it formerly was—by requiring the members to pay for their JOURNALS individually. He said that the question of subscription fee would come up for discussion at the Annual Meeting, and that it may be reduced, but pointed out that any person joining after September 1st in each year is entitled to be carried over the succeeding year on the one subscription. He also said that in order to induce a large number of the Toronto Inspectors to join up before the Convention he thought it might be arranged that any applications sent in during the interim before the Annual Convention should be dealt with under the above rule.

A further question was asked about Associate Members. Mr. Hague pointed out that this question had been very fully discussed in a special article appearing in the March JOURNAL, and read extracts from the same, pointing out that most of the Toronto Inspectors by reason of their age and experience can become full members. In the Provincial meetings and in the local centres no distinction is made between full members and associates, each having full vote and privileges. It is only at the Annual Business meeting, and more particularly in the election of officers and dealing with amendments to the Constitution, that associate members have no vote. He showed that our Constitution in this respect is similar to that of the Sanitary Inspectors' Association of England, and that this is necessary in order to preserve the high standard of the Association.

A very good reception was accorded the President, and we are in hopes that the result may be an influx of new members in the City of Toronto.

A pleasing feature was the attendance of a number of lady Housing Inspectors.

The President was not able to visit the City of Hamilton, but we expect that the Sanitary Inspectors of that City will be with us at the Convention as they were at Brantford last year.

The Convention is to be held in the City Hall, Toronto, on September 14th, 15th and 16th, and a hearty welcome is assured us by the City Council.

Toronto is such a convenient centre for the Ontario Inspectors that we should be sure of a large attendance.

ONTARIO

The Provincial Department of Health of Ontario

Communicable Diseases Reported for the Province for the Weeks Ending May 7th, 14th, 21st, 28th 1927.

COMPARATIVE TABLE

Diseases	1927 Cases	1927 Deaths	1926 Cases	1926 Deaths
Cerebro Spinal Meningitis	4	—	—	—
Chancroid	1	—	1	—
Chicken Pox	619	—	423	—
Diphtheria	166	8	145	8
Encephalitis	2	2	—	2
Gonorrhoea	93	—	117	—
Influenza	57	37	—	30
German Measles	854	—	690	—
Measles	1251	3	2962	2
Mumps	194	—	157	—
Pneumonia	251	48	—	232
Poliomyelitis	—	—	—	—
Scarlet Fever	757	5	501	6
Septic Sore Throat	—	—	—	—
Small Pox	65	—	51	1
Syphilis	110	1	133	—
Tuberculosis	119	55	201	84
Typhoid	56	8	32	—
Whooping Cough	180	3	321	10
Goitre	—	—	—	—
Tetanus	1	—	—	—

The following Municipalities reported cases of Small Pox:—Ottawa 4, Blind River 2, Kingsville 1, Belleville 1, Sidney Tp. 2, Chatham Tp. 1, Newbury 6, Colborne 1, Oshawa 1, Peterboro 1, Westmeath 4, Cumberland 1, Penetanguishene 1, Finch Tp. 9, Galt 2, Waterloo 5, Guelph 1, Toronto 22.

The Industrial Physician's Services to Industry

FROM THE INDUSTRIAL HYGIENE DIVISION PROVINCIAL DEPARTMENT OF HEALTH, ONTARIO.

TODAY the number of industrial physicians in plants is increasing, enormously in U.S.A. and steadily, though to a less extent in Canada. What are these physicians doing and is there any sound reason why people who happen to be working together should be treated for their illness by one and the same physician? The Division of Industrial Hygiene of the Provincial Department of Health answers as follows:

To take the second question first, physicians are not in industry to treat sickness. They are there to prevent it. And the answer to the first question is similar. What industrial physicians are doing in industry is bringing all the facilities of medical science to the task of preventing sickness among industrial workers, and there is every reason that the prevention of sicknesses arising from common causes should be the concern of one and the same physician. Quite evidently that physician has an enormous opportunity. He has also an encouraging task for it has been proved that preventive measures in industry are effective and show tangible results in the absence records.

Now how exactly is medical science utilised for the benefit of industry, or, in other words, what are the actual means by which the industrial physician prevents sickness? Broadly, medical science is required first for the general supervision of the health of workers, including physical examination and constant observation, and second for the study of industrial processes from the point of view of their effect on health. It is through these two means that the industrial physician is able to prevent sickness in the following concrete and practical ways:—

(1) by recognizing general diseases in their early stages and thus facilitating early treatment by the family physician;
(2) by relieving minor ailments before they develop into serious conditions;
(3) by preventing infection of industrial accidents;
(4) by preventing the spread of epidemics;
(5) by recognizing early and mild effects of hazardous processes and thus facilitating preventive measures before the effects become pronounced. Thus, in lead, blood findings often indicate the presence of lead before the poisoning is producing other signs and symptoms;

(6) by studying what is the dangerous element in industrial processes or substances and thus being in a position to advise the type of preventive measure indicated;

(7) by supervising the general conditions of the plant, such as ventilation, lighting, sanitary facilities, etc., and keeping them up to the standards required for health;

(8) by giving practical advice on small points of health which otherwise would be ignored.

The profits to industry are obvious. The plant which has a good industrial physician has provided itself with some one whose definite job is to specialize on the upkeep of its most important equipment—the human machines. The profit to employees is even more obvious for they *are* the human machines and are personally and deeply concerned in their own upkeep. In the industrial physician they have some one whose job it is to know both the weak points in the individual and the danger points in his job. Almost more important, they have some one whose duty it is to be concerned in those minor ailments which may quickly yield to treatment and which, untreated, are hampering and irritating although not necessarily leading to serious disability. Often it seems hardly worth while to consult a doctor on small and apparently trivial points—in such cases it is an obvious convenience to have a doctor's advice easily, almost casually, available. From the doctor's point of view it is the fact that he is thus easily and casually consulted that gives him his chance of real achievements in prevention of sickness.

News Notes

In Nova Scotia, according to a statement from the Provincial Department of Health, the average age at death is nearly double that in some of the less fortunate provinces. Between 1910 and 1925, it increased from 41 to 52.

The infant death rate, which, a few years ago, was 114 per 1,000 births, has been cut till it now varies between 70 and 80.

"The age at which half of a given number of children born to-day will have died," Dr. A. C. Jost stated, "is 59 for males and 62 for females. That is, among men, exactly as many individuals will live to be older than 59 as die before that age."

An interesting table issued by the Nova Scotia Department of Health, too, is a list giving the proportions of the population in each province which have passed the hundred mark.

Nova Scotia	1 in 14,000
P.E.I.	1 in 22,000
New Brunswick	1 in 48,000
Saskatchewan	1 in 36,000
Manitoba	1 in 47,000
Alberta	1 in 84,000
British Columbia	1 in 87,000
Ontario	1 in 51,000
Quebec	1 in 82,000

Health Commissioner Harris of New York city, who recently went to Montreal to survey the typhoid situation, paid high tribute to the work of Dr. Boucher, Montreal's health officer, in his attempts to combat the epidemic. Dr. Boucher was handicapped, Dr. Harris commented, because insufficient power was vested in the civic health officials.

As an additional sidelight on the economic losses in domestic and export trade which inevitably follow any serious outbreak of preventable disease, Dr. Harris stated that the New York embargo on export milk and cream from the Montreal area would be continued. One particular firm, which is in the position of an innocent sufferer since its officials have always imposed the most rigorous sanitary regulations and far-reaching methods of inspection on the farmers supplying it, is losing

several thousands monthly as long as the embargo lasts, through the cutting-off of its export trade in cream.

Dr. R. B. Robson, Walkerville's school medical officer, made some outspoken criticisms of Ontario's attitude towards mentally deficient children, at the last meeting of the local school board.

"The province of Ontario is utterly lacking in educational facilities for mentally deficient children," he declared. "The only suitable institution in the province is so overcrowded that admission is almost impossible."

An interesting development in voluntary public health work throughout the United States is the activity of the Commonwealth Fund.

Each year, the Hospital aids in building two rural hospitals in selected communities. Each community selected contributes one-third of the capital expense and assumes the operating costs. The Fund donates the remainder of the money required for equipment and construction and provides plans and specifications for a modern hospital suited to local needs.

Last year, hospitals were built at Farmville, Virginia and Glasgow, Kentucky, and the first of this year's grants goes to Farmington, Maine, a town about 60 miles from the Canadian border. The town is to receive approximately $140,000 as the Commonwealth Fund donation.

Details of the severity of the recent European influenza epidemic are now partially available htrough the Health Section of the League of Nations. The epidemic had virtually run its course everywhere by the end of April.

Since there is a wide degree of difference in the efficiency of the medical certification of the causes of death in general throughout European countries, owing to the varying systems of tabulating deaths from complications, this evaluation of the deaths which the epidemic caused, based on provisional returns, is apt to be uncertain. It is probable, however, that the figures released for towns and cities can be considered fairly comparable.

The average death rate from influenza per 100,000 inhabitants was 20.7 in Germany and 21.9 in the Netherlands. In English towns it was considerably higher—38.3—and the general death-rate was also higher. The highest rates of all are from Switzerland, where the western part of the country suffered twice as much as the remainder and the city of Geneva, the most of all.

Rates in different towns in the same country vary widely. In Britain, for instance, they range from 8.5 in Glasgow to 63.8 for Nottingham.

Editorial

READING IT IN THE PAPERS

Improbable as it is that any members of the medical profession could remain uninterested, it would have been quite possible, until recently, for a practising physician to carry on in his usual way and remain entirely unaffected by the increasing attention on the part of the average man to matters of public health.

Now it is a matter of the utmost importance to the average doctor to be in touch with the developments of public health movements and to realize, thoroughly, that the Canadian of to-day is vitally concerned with communal well-being. If the medical man desires definite proof of this, he need only turn to the pages of any newspaper.

Less than five per cent. of our Canadian papers fail to devote space regularly to a health feature of some sort or other. On the basis of things as they are, it seems reasonable to declare that the editor and the dealer in syndicate material for newspapers were alive to the fact that the public demanded health information before the medical profession as a whole realized it.

Series of articles began to appear regularly in groups of newspapers, written by men whose ability to speak with authority—in some cases, at least—is very much open to doubt. At the commencement, there was a tendency on the part of a large portion of the medical profession to view these journalistic outpourings with amusement.

Then it became obvious that these daily-health-authors were starting to wield a very widespread influence.

In a number of cases it was an influence for good, but in a great many others it created complications. Two men, under treatment for venereal disease at a Canadian hospital, recently refused point-blank to pay any further attention to the clinic officials. The medical sage of their favorite daily had informed them that syphilis could be cured by a fruit-juice diet, and they were done with any more arduous type of treatment.

There are hundreds of Canadians who accept the words of the syndicate-writer in matters of health and hygiene, as gospel. One mother, a few weeks ago, wrote at length declaring that her little daughter had been completely cured of epilepsy by following newspaper suggestions and confining her diet entirely to grape-fruit.

What has happened is that there has sprung up, in the minds of a large portion of the public, a very keen public health consciousness, fostered to an extent by the efforts of health officers and others to drive home the fact that communal health was a problem for everyone to

consider. Determined to get health information, the public has promptly seized whatever was at hand, and the rapidly-growing battalion of health journalists happened to supply the most convenient means.

The fact remains that the attitude of many thousands of persons toward the whole medical profession is now colored by their belief in what they "read in the paper."

This, coupled with the new attitude toward health matters and the general theory that every man is entitled to health knowledge even though he does not care to expend much effort in securing it, is bound to have a far-reaching effect on the work of the doctor. It is a matter which deserves the most careful study and close observation.

THE FARMER WANTS ADVICE

High cost of medical advice is worrying the western agriculturist. When the Manitoba farmer and his wife met in Brandon last winter, they discussed the problem at length, though no definite conclusions were then reached.

Now the United Farmers of Saskatchewan are backing a definite proposal.

They want free health clinics for country residents. As outlined by John A. Stoneman, president of the organization, the suggested clinics would be expected to supply advice only. It was not intimated, at the Saskatchewan convention, that the farmer wanted his treatment gratis as well.

Quite aside from the actual matter of clinics, their advisability or anything connected with them, the activity in Saskatchewan is deserving of encouragement on one count in particular.

If there is any class in the community which, more than another, needs to attack health problems, it is the rural resident.

The farmer possibly suffers more acutely from preventable disease than any other variety of individual. Dr. L. L. Lumsden of the United States Bureau of Health, after lengthy research, declares that he loses one day out of every four through unnecessary illness. Such investigation as the Canadian Social Hygiene Council has been able to carry on in the Dominion, though yet far from complete, indicates that these figures are also approximately correct for Canada.

John Carlyle, an outstanding American editorial writer, has given the statistics a vivid touch for the benefit of the average citizen.

"Come on, is what the farmer says," as Mr. Carlyle phrases it, "have a few cramps with us.

"Or typhoid fever perhaps. Or malaria. Or consumption. No matter what disease or illness you prefer, the farm has it in stock."